CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 18. (Cancelled)

19. (Previously Presented) An edge node of an optical switching network, comprising:

a stream slicer to slice a data block into data slices;

a header pre-append block communicatively coupled to receive the data slices from the stream slicer and to append a slice header to each of the data slices;

a scheduler coupled to schedule the data slices into fixed length time slots after an established optical path exists through the optical switching network; and

a burst transmit block coupled to generate an optical burst for transmission onto the optical switching network, the optical burst to include the data slices with the appended slice headers, wherein the burst transmit block converts a group of the data slices from an electrical realm to an optical realm after the entire optical burst comprising the group of the data slices has been scheduled, wherein the burst transmit block is further coupled to generate the optical burst as a series of fixed length optical cells, each of the optical cells containing a fixed number of the data slices and appended slice headers, wherein the burst transmit block is further coupled to generate optical bursts through the established optical path through the optical switching network, wherein the established optical path includes a path defined by the execution of a Resource Reservation Protocol—Traffic Engineering ("RSVP-TE") signaling protocol, wherein the RSVP-TE signaling protocol includes a hybrid optical bursts switching ("OBS") network extension, wherein the scheduler schedules the data slices independent of the RSVP-TE signaling protocol.

20. (Cancelled)

21. (Cancelled)

22. (Previously Presented) The edge node of claim 19 wherein the scheduler is coupled to schedule additional data slices into additional optical bursts according to a scheduling algorithm for transmission on different carrier wavelengths through the optical switching network.

23. (Original) The edge node of claim 19, further comprising a buffer communicatively coupled to the stream slicer, the buffer to receive data streams from another network and buffer the data streams as the data blocks.

24. (Original) The edge node of claim 19, wherein the header pre-append block is further coupled to generate a fragment identifier ("ID") and a data stream ID for each of the data slices, the slice header comprising the fragment ID and the stream ID.

25. (Previously Presented) A system, comprising:

an edge node to receive data streams from a first network, the edge node comprising:

a stream slicer to slice the data streams into data slices;

a header pre-append block to append a slice header to each of the data slices;

a scheduler to schedule the data slices for transmission within fixed length optical cells; and

a burst transmit block to generate optical bursts containing the fixed length optical cells, the optical bursts to be transmitted during fixed time slots, the burst transmit block to convert a group of the data slices from an electrical realm to an optical realm after an entire optical burst of the group of the data slices has been scheduled;

an egress node optically coupled to receive the optical bursts and to deliver the data streams to a second network;

a plurality of switching nodes optically coupled between the edge node and the egress node to route the data streams from the edge node to the egress node,

wherein the scheduler schedules the data slices independently of a signaling protocol used to establish a path across the plurality of switching nodes, wherein the scheduler additionally schedules the data slices after the signaling protocol establishes the path across the plurality of switching nodes; and

a management station to establish optical paths through the second network, wherein establishing the optical paths includes executing a Resource Reservation Protocol—Traffic Engineering ("RSVP-TE") signaling protocol, wherein the RSVP-TE signaling protocol includes a hybrid optical bursts switching ("OBS") network extension.

26. (Cancelled)

27. (Previously Presented) The system of claim 25 wherein the scheduler is further coupled to schedule the data slices from one of the data streams into multiple ones of the optical bursts according to a scheduling algorithm for transmission to the egress node, each of the optical bursts to be transmitted on a different carrier wavelength.

28. (Previously Presented) The system of claim 25 wherein the header pre-append block is further configured to generate a fragment identifier ("ID") and a data stream ID for each of the data slices, and wherein the slice header comprises the fragment ID and the stream ID.

29. (Previously Presented) The system of claim 28 wherein the egress node is further configured to reassemble the data slices of one of the data streams prior to delivering the one of the data streams to the second network, if the data slices arrive at the egress node out of order.